

**B.TECH. (AEROSPACE ENGINEERING)
(BTAE)**

Term-End Examination

December, 2013

**BAS-011 : AIRCRAFT SYSTEMS AND
AIRWORTHINESS REQUIREMENTS**

Time : 3 hours

Maximum Marks : 70

Note : Answer any seven questions.

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1. (a) Which section of Civil Aviation Requirements (CAR) deals specifically with "Design Standard any type Certification ? 5
 - (b) What are the requirements for issuance of "Type Certificate" of an Aircraft and it's components as per series F of CAR section 2 ? 5
 2. (a) What are the advantages and disadvantages of pneumatic system over hydraulic system in air craft control ? 5
 - (b) What are the requirements of pressurization system in aircraft ? Explain in brief the pressurization system. 5
 3. What are the requirements of oxygen system in aircraft ? Explain in detail about oxygen system in aircraft system ? 10
 4. Briefly explain the following as applicable to Aircraft :
 - (a) Air conditioning systems. 5
 - (b) Different types of fuel tank. 5

5. (a) Explain the purpose of an Auxiliary Power Unit (APU) in an Aircraft. Bring out the basic difference between an APU and GPU (Ground Power Unit). 5
- (b) Explain in brief the stability in a servo control system. 5
6. Explain the different types of lubrication systems in air craft. 10
7. Briefly describe basic hydraulic systems with neat sketches. 10
8. What is the "Standard instrument panel layout "in the Cockpit as per ICAO ? Explain briefly the types of instruments in an aircraft panel. 10
9. (a) Explain in brief the gravity feed fuel system ? 3
- (b) Discuss briefly the basic fuel system components of a Jet engine. 7
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